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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTY.'S DOCKET: WADDELL=1

In re Application of:)	Art Unit: 3641
)	
John L. WADDELL et al.)	Examiner: STEPHEN JOHNSON
)	
Appln. No.: 10/630,897)	Washington, D.C.
)	
Filed: July 31, 2003)	Confirmation No. 9607
)	
For: ACOUSTIC SHOCK WAVE)	April 27, 2006
ATTENUATING ASSEMBLY)	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Honorable Commissioner for Patents
U.S. Patent and Trademark Office
Customer Service Window, Mail Stop AF
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Sir:

Replying to the Office Action mailed April 4, 2006,
please enter the following Pre-Appeal Brief Request for Review.

What is claimed:

Claims 13, 14 and 17-22 are drawn to a shock-
attenuating assembly that is sufficiently flexible to wrap around
any shaped structure. The assembly comprises, in combination, a
first film of flexible resin material which is optionally water-
impermeable or coated with water-impermeable material; a second
film of flexible resin material which is optionally water-
impermeable or coated with a water-impermeable material, wherein
the second film has attached pockets spaced from each other along
the second film; the first film is attached to the second film
via a plurality of seams that surround the spaced pockets such
that the assembly is sufficiently flexible to surround any shaped

structure. Each of the pockets is filled with a shock wave attenuating material having the flow properties of a liquid.

The specification defines what is meant by a shock-attenuating (or blast-mitigating) assembly. Paragraph 0016 states that the assembly of the present invention provides shock wave, and therefore blast, attenuation capabilities in both confined spaces and unconfined areas. Paragraph 0017 expands on this, namely, the assembly is highly efficient at rapidly attenuating high pressure shock waves, i.e., blasts. The assembly provides shock wave attenuation in confined spaces without requiring the space to be completely filled by aqueous foam or any other agent or medium. The assembly provides attenuation of shock waves for both proximate and remote explosions.

The shock-attenuating medium is described in paragraph 0023 as preferably a flowable medium which impedes shocks. Materials that possess elements of differing shock impedance, the presence of phase boundaries and the ability to absorb energy by work done on producing irreversible changes within the material are confined within individual cells or recesses in a flexible sheet. Substantial energy from the shock wave is absorbed by the attenuating medium, enhanced by confinement within the cells or recesses.

As described in paragraph 0025, the term "mechanical properties and flow properties of a fluid" refers to the ability of the attenuating medium to act in the nature of a liquid mass to resist relative displacement by surface tension and viscous forces, and the ability to substantially scatter and disperse pressure conditions transmitting therethrough by virtue of multitudinous curved surfaces dividing gaseous and solid or liquid and solid phases, and enabling the generation of turbulent flow fields by transmitting pressure conditions. More briefly, these terms may be taken as referring to the ability to resist

applied shear forces in the nature of fluid viscosity. The attenuating medium assumes the shape of the cells or recesses, while at the same time resisting applied shear forces in the nature of viscosity.

In rejecting the claims, the Examiner has ignored the fact that the claimed device is a shock-attenuating assembly that contains a shock wave attenuating material having the flow properties of a liquid. None of the cited references even hints at shock or blast attenuating devices.

Colle, 4,184,788, discloses a device for erosion control structures made of two sheets of flexible material joined about their entire periphery forming a space adapted to receive a flowable material therein. However, as disclosed at column 4, lines 38-42, the flowable material is a cementitious slurry or a flowable asphalt, which hardens once it has been introduced into the device. This device is designed for erosion control, not for blast mitigation.

Munch, 4,700,706, adds nothing to Colle, as Munch discloses a cold and warm pack for physiotherapy. There is nothing in this cold and warm pack that includes a blast or shock attenuating material.

Poux, 2,602,302, discloses a combination ice and hot pack including a series of spaced-apart compartments filled with liquid such as water for applying heat or cold to the outside of the body. There is nothing about shock or blast attenuation.

Ava, 3,795,994, discloses socks having air cushions interposed between the wearer's foot and a boot. Contrary to the Examiner's allegations, there is no shock attenuating material in, the sense of the shock attenuating material in the present application, in the socks disclosed therein.

Bertram discloses heat-insulating fabric articles having pockets containing polystyrene beads for heat insulation. Heat insulation has nothing to do with the blast mitigation.

The Examiner has cited no patents specifically dealing with blast or shock, attenuation. Despite the Examiner's contention that the title of the invention and the preamble of the claims is immaterial, it is respectfully submitted that this is not the case for every application. In *Corning Glass Works v. Sumitomo Electric U.S.A.*, 868 F.2d 1259; 9 USPQ2d 1962 (Fed. Cir. 1989), the Court noted that anticipation requires that every limitation of the claim in issue be disclosed, either expressly or under principles of inherency, in a single prior art reference. 1965; *Kalman v. Kimberly-Clark Corp.*, 713 F. 2d 760, 771; 218 USPQ 781, 789 (Fed. Cir. 1983). In *Corning* the court found that the specification made clear that the inventors were working on the particular problem of an effective optical communication system, not on general improvements in conventional optical fibers. The court said that the effect preamble language should be given can be resolved only on review of the entirety of the patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim. There, the 915 specification makes clear that the inventors were working on a particular problem of an effective optical communication system not on general improvements in conventional optical fibers. To read the claim in light of the specification indiscriminately to cover all types of optical fibers would be divorced from reality... Thus, we conclude that the claim preamble in this instances does not merely state a purpose or intended use for the clamed structure... Rather, those words do five "life and meaning" and provide further positive limitations to the invention claimed. 1966.

In the present case, the claims are drawn to a shock-attenuating assembly containing shock wave attenuating material. It is clear from the specification that this assembly is designed to minimize or mitigate the effects of a blast, or explosion. Despite the Examiner's allegations that water or asphalt or other materials disclosed in the cited patents have shock attenuating properties, it is respectfully submitted that this is not the case, and that these materials would not be sufficient to mitigate the effect of a blast.

It is clear from the submissions describing the advantages of applicant's assembly that the assembly is designed for protection from blasts. This is far beyond the inherent capabilities of the assemblies in the cited patents, all of which have a variety of uses not related to shock attenuation.

In conclusion, it is respectfully requested that the Examiner's rejection be reversed and the claims allowed.

Respectfully submitted,

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